CLAIMS

What is claimed is:

1. A method of transmitting data between a first location and a second location comprising:

obtaining a first data stream at said first location;

packet compressing said first data stream;

sending said packet compressed first data stream to said second location;

obtaining a second data stream at said second location;

bulk compressing said second data stream; and

sending said bulk compressed second data stream to said first location.

2. The method of Claim 1 further comprising framing said first data stream after said step of packet compressing said first data stream and prior to said step of sending said packet compressed first data stream to said second location.

3. The method of Claim 1 further comprising spreading said first data stream after said step of packet compressing said first data stream and prior to said step of sending said packet compressed first data stream to said second location.

4. The method of Claim 3 wherein said spreading step further comprises applying a forward error correction code to said first data stream.

5. The method of Claim 1 further comprising modulating said first data stream after said step of packet compressing said first data stream and prior to said step of sending said packet compressed first data stream to said second location.

6. The method of Claim 1 further comprising spreading said second data stream after said step of bulk compressing said second data stream and prior to said step of sending said bulk compressed second data stream to said first location.

7. The method of Claim 6 wherein said spreading step further comprises applying a forward error correction code to said second data stream.

8. The method of Claim 6 wherein said spreading step further comprises applying a chipping code to said second data stream.

9. The method of Claim 1 further comprising modulating said second data stream after said step of bulk compressing said second data stream and prior to said step of sending said bulk compressed second data stream to said first location.

10. The method of Claim 1 further comprising packet de-compressing said first data stream at said second location.

11. The method of Claim 10 further comprising de-modulating said first data stream prior to said step of de-compressing said first data stream at said second location.

12. The method of Claim 10 further comprising de-spreading said first data stream prior to said step of de-compressing said first data stream at said second location.

13. The method of Claim 12 wherein said de-spreading step further comprises applying an inverse forward error correction code to said first data stream.

14. The method of Claim 10 further comprising de-framing said first data stream prior to said step of de-compressing said first data stream at said second location.

15. The method of Claim 1 further comprising bulk de-compressing said second data stream at said first location.

16. The method of Claim 15 further comprising de-modulating said second data stream prior to said step of de-compressing said second data stream at said first location.

17. The method of Claim 15 further comprising de-spreading said second data stream prior to said step of de-compressing said second data stream at said first location.

18. The method of Claim 17 wherein said de-spreading step further comprises applying an inverse chipping code to said second data stream.

19. The method of Claim 17 wherein said de-spreading step further comprises applying an inverse forward error correction code to said second data stream.

20. The method of Claim 1 further comprising packet encrypting said first data stream prior to said step of sending said first data stream to said second location.

21. The method of Claim 1 further comprising bulk encrypting said second data stream prior to said step of sending said second data stream to said first location.

22. A method of transmitting data between a ground segment and an airborne segment of a network comprising:

obtaining a first data stream at said ground segment;

packet compressing said first data stream;

sending said packet compressed first data stream to said airborne segment;

packet de-compressing said packet compressed first data stream at said airborne segment;

obtaining a second data stream at said airborne segment;

bulk compressing said second data stream;

sending said bulk compressed second data stream to said ground segment; and

bulk de-compressing said bulk compressed second data stream at said ground segment.

23. The method of Claim 22 further comprising packet encrypting said first data stream prior to said step of sending said first data stream to said airborne segment.

24. The method of Claim 22 further comprising bulk encrypting said second data stream prior to said step of sending said second data stream to said ground segment.

25. A communications network including a forward link and a return link, the network comprising:

a packet compressor on said forward link for packet compressing data sent thereover while preserving routing information contained in said data; and

a bulk compressor on said return link for bulk compressing data sent thereover to minimize bandwidth consumption.

26. The network of Claim 25 further comprising a packet encryptor on said forward link for packet encrypting data sent thereover while preserving routing information contained in said data.

27. The method of Claim 25 further comprising a bulk encryptor on said return link for bulk encrypting data sent thereover to maximize encryption.